UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,780	01/18/2002	Shunichi Kaizu	862.2490	9558

5514 7590 11/01/2006

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
POON, KING Y	
ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,780	KAIZU, SHUNICHI	
	Examiner	Art Unit	
	King Y. Poon	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 January 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without traverse of the restriction requirement in the reply filed on 8/17/2006 is acknowledged.

According, the examination is based on the second embodiment of page 21, line 19, fig. 4, fig. 5.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "output control means for outputting image data processed by said first image processing means via the external bus; preservation means for preserving the result of processing on the image data by said first processing means" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

From the drawing of fig. 4, it appears that the first image processor means are 2 and 301, the second image processor is 5, clearly, the image output controller outputting image data processed by the 5, not by 2, and 301; preservation means preserve the result of processing on the image data by 5, not by 2 and 301.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-18 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation of "output control means for outputting image data processed by said first image processing means via the external bus; preservation means for preserving the result of processing on the image data by said first processing means" is subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

From the drawing of fig. 4, it appears that the first image processor means are 2 and 301, the second image processor is 5, clearly, the image output controller outputting image data processed by the 5, not by 2, and 301; preservation means preserve the result of processing on the image data by 5, not by 2 and 301.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-18 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: output control means for outputting image data processed by said second image processing means via the external bus; preservation means for preserving the result of processing on the image data by said second processing means.

8. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: key element 301 that is added between image processor 2 and image buffer controller 3 is omitted (see lines 2-10, page 22, specification); and S29 of fig. 5.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17, 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 18 is drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1(a) (Functional Descriptive Material) states:

"Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer."

"Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized."

Claim 17, while defining a storage medium does not define a "computer-readable medium" and is thus non-statutory for that reasons. A storage medium can range from paper on which the program is written, to a program simply contemplated and

memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" in order to make the claim statutory.

"In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." - MPEP 2106.IV.B.1(a)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1, 3, 4, 11, 13, 14, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurahashi et al (US 5,687,332).

Regarding claims 1, 11: Kurahashi teaches an image processing apparatus (22, fig. 2) connected to at least an external controller (23, fig. 2, fig. 4) via an external bus (21, fig. 2, fig. 4), comprising: first image processing means (314, fig. 3) for processing input image data; image storage means for storing image data processed by said first image processing means (316, fig. 3, column 8, lines 53-56); second image processing means (image processing apparatus 32, fig. 2, column 8, lines 57-60) image for processing image data read from said image storage means; output control means (311, fig. 3) for outputting image data processed by said first image processing means via the external bus (column 2, lines 45-53, column 3,lines 1-5); preservation means

(33, column 6, lines 58-60) for preserving the result of processing on the image data by said first processing means; and pseudo master means (editing data managing unit, column 10, lines 40-45, note) for controlling a preservation operation by said preservation means, in correspondence with the predetermined image data output by said output control means.

Note: although the editing data managing unit 114, is shown in fig. 11, not fig. 3; it would have been obvious for a person with ordinary skill in the art to modified fig. 3 to include an editing data managing unit to mange the editing data stored in the editing data retaining unit 313 of fig 3 because data in a memory would be easily located and stored using an managing unit; especially the use of an managing unit for managing editing data located in editing data retaining unit is Kurahashi's invention.

Regarding claims 3, 13: Kurahashi teaches wherein said first image processing means generates and processes plural items of image data (4, 5, fig. 1) from one item of the input image data (1, fig. 1), wherein said preservation means preserves the result of image data processing (editing data for 6, fig. 1) corresponding to each of the plural items of image data generated and processed from one item of the input image data.

Regarding claims 4, 14: Kurahashi teaches said pseudo master menas controls the preservation operation of the preservation means, in correspondence with the image data output by the output control means of one of the plural items of image data processed by the first image processing means, for one frame (fig. 1 show each edited image is one frame), to the external bus.

Regarding claims 17, 18: Kurahashi teaches the image processing method of claim 11 is carry out by a computer (workstation or server, column 2, lines 18-23).

Inherently, a computer workstation or server is controlled by a program stored in an computer executable medium.

12. Claims 2, 5, 6, 12, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurahashi et al as applied to claim 1, 3, 11, 13 above, and further in view of well known prior art.

Regarding claims 2, 12: Kurahashi does not specifically teaches, wherein one or both of said output control means and said-pseudo master means start output processing on subsequent image data stored in said image storage means, in correspondence with the predetermined amount of the image data output by said output control means.

However, it is well known in the art that the start of transmission of image data A depends on the amount of image data B that is to transmitted before A. The larger amount of image data of B is to be transmitted, the start of transmission of image data A is further delayed (official notice).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kurahashi such that: wherein one or both of said output control means and said-pseudo master means start output processing on subsequent image data stored in said image storage means, in

correspondence with the predetermined amount of the image data output by said output control means, such that image data would be properly transmitted.

Regarding claims 5, 15: Kurahashi does not states: wherein said output control means issues an interrupt request to the external controller when transfer of all the plural items of image data generated and processed from one item of the input image data to the external bus is completed, wherein the external controller performs reading of the result of processing preserved in said preservation means and setting for image processing on the next frame, in correspondence with the interrupt request.

However, it is well known in the art that in data communication, it is very important to have communication parties to be notified with the end transferred data (interrupt) such that the receiving parties would not have to keep waiting for data and would not have mix data with other data (official notice).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kurahashi to include: wherein said output control means issues an interrupt request to the external controller when transfer of all the plural items of image data generated and processed from one item of the input image data to the external bus is completed, wherein the external controller performs reading of the result of processing preserved in said preservation means and setting for image processing on the next frame, in correspondence with the interrupt request.

Regarding claims 6, 16: Kurahashi does not states arbitration means for arbitration between an access request from the external controller and the preservation

operation of the result of processing by said pseudo master means and said preservation means.

However, it is well known in the art that a computer has an arbitration means for controlling what software is to be run at a time (official notice).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kurahashi to include: arbitration means for arbitration between an access request from the external controller and the preservation operation of the result of processing by said pseudo master means and said preservation means, such that the execution of the an access request from the external controller and the preservation operation of the result of processing by said pseudo master means would be properly executed, or the data bus is properly shared.

13. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurahashi et al as applied to claim 1 above, and further in view of Verghese (US 6,433,885).

Regarding claim 7: Kurahashi teaches image processing includes: changing resolution (column 1, lines 45-50, column 8, lines 1-10) and scaling (enlarge, fig. 1).

Kurahashi does not teach wherein said first image processing means includes first processing means for generating first image data and second processing means for generating second image data.

Verghese, in the same area of generating and processing image data (column 1, lines 40-55), teaches using different processing means (fig. 3, column 3, lines 10-20) or different image processing.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kurahashi to include: first processing means for generating first image data (resolution processed data) and second processing means for generating second image data (enlarged data).

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kurahashi by the teaching of Verghese because: it would have prevent expensive and time consuming rewriting of software when improved image processing method of a processing is generated as taught by Verghese, column 2, lines 10-25).

Regarding claim 8: Kurahashi teaches to process image data's resolution (column 1, lines 45-50, column 8, lines 1-10).

Since a changed resolution of an image is either higher or lower compare to unchanged resolution, it would have been obvious that Kurahashi's invention includes: the first image data has a resolution higher than that of the second image data.

Regarding claims 9, 10: Kurahashi doe not teach, wherein said first image processing means performs filter processing on the image data, while said second image processing means performs compression coding processing on the image data.

Verghese teaches wherein said first image processing means performs filter processing on the image data (dither, fig. 3, it is well known in the art that computer

dither processing is filter processing, official notice, using a well known method would have allowed image produced to be of high quality), while said second image processing means performs compression coding processing (JPEC, fig. 3) on the image data.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kurahashi to include: wherein said first image processing means performs filter processing on the image data (dither processing, it is well-known in the art that dither processing would improve display or printed image and preventing artifact, official notice), while said second image processing means performs compression coding processing on the image data (reduce the amount of data transmitted, column 1, lines 52-55, Verghese).

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 30, 2006

KING Y. POON
PRIMARY EXAMINER